

**Notice of Allowability**

Application N .

09/927,547

Examiner

Tarifur R Chowdhury

Applicant(s)

KUBO ET AL.

Art Unit

2871

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address--

All claims being allowable, PROSECUTION ON THE MERITS IS (OR REMAINS) CLOSED in this application. If not included herewith (or previously mailed), a Notice of Allowance (PTOL-85) or other appropriate communication will be mailed in due course. **THIS NOTICE OF ALLOWABILITY IS NOT A GRANT OF PATENT RIGHTS.** This application is subject to withdrawal from issue at the initiative of the Office or upon petition by the applicant. See 37 CFR 1.313 and MPEP 1308.

1. ☒ This communication is responsive to interview held on 08/20/02.
2. ☒ The allowed claim(s) is/are 29-36.
3. ☒ The drawings filed on 13 August 2001 are accepted by the Examiner.
4. ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
  - a) ☐ All    b) ☐ Some\*    c) ☐ None    of the:
    1. ☐ Certified copies of the priority documents have been received.
    2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
    3. ☐ Copies of the certified copies of the priority documents have been received in this national stage application from the International Bureau (PCT Rule 17.2(a)).
- \* Certified copies not received: \_\_\_\_\_.
5. ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
  - (a) ☐ The translation of the foreign language provisional application has been received.
6. ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Applicant has THREE MONTHS FROM THE "MAILING DATE" of this communication to file a reply complying with the requirements noted below. Failure to timely comply will result in ABANDONMENT of this application. **THIS THREE-MONTH PERIOD IS NOT EXTENDABLE.**

7. ☐ A SUBSTITUTE OATH OR DECLARATION must be submitted. Note the attached EXAMINER'S AMENDMENT or NOTICE OF INFORMAL PATENT APPLICATION (PTO-152) which gives reason(s) why the oath or declaration is deficient.
8. ☐ CORRECTED DRAWINGS must be submitted.
  - (a) ☐ including changes required by the Notice of Draftsperson's Patent Drawing Review (PTO-948) attached
    - 1) ☐ hereto or 2) ☐ to Paper No. \_\_\_\_\_.
  - (b) ☐ including changes required by the proposed drawing correction filed \_\_\_\_\_, which has been approved by the Examiner.
  - (c) ☐ including changes required by the attached Examiner's Amendment / Comment or in the Office action of Paper No. \_\_\_\_\_.

Identifying indicia such as the application number (see 37 CFR 1.84(c)) should be written on the drawings in the top margin (not the back) of each sheet. The drawings should be filed as a separate paper with a transmittal letter addressed to the Official Draftsperson.

9. ☐ DEPOSIT OF and/or INFORMATION about the deposit of BIOLOGICAL MATERIAL must be submitted. Note the attached Examiner's comment regarding REQUIREMENT FOR THE DEPOSIT OF BIOLOGICAL MATERIAL.

**Attachment(s)**

- |  |   |
|--|---|
| 1 <input type="checkbox"/> Notice of References Cited (PTO-892)  | 2 <input type="checkbox"/> Notice of Informal Patent Application (PTO-152)          |
| 3 <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)                      | 4 <input checked="" type="checkbox"/> Interview Summary (PTO-413), Paper No. _____  |
| 5 <input checked="" type="checkbox"/> Information Disclosure Statements (PTO-1449), Paper No. <u>9</u> . | 6 <input checked="" type="checkbox"/> Examiner's Amendment/Comment                  |
| 7 <input type="checkbox"/> Examiner's Comment Regarding Requirement for Deposit of Biological Material   | 8 <input checked="" type="checkbox"/> Examiner's Statement of Reasons for Allowance |
|  | 9 <input type="checkbox"/> Other  |

## EXAMINER'S AMENDMENT

### *Election/Restriction*

1. This application contains claims directed to the following patentably distinct species of the claimed invention:

Species I: a liquid crystal display comprising a first electrode region (transmissive) having a thickness  $d_1$  and a second electrode region (reflective) having a thickness of  $d_2$  and the relationship between  $d_1$  and  $d_2$  are defined by  $d_1 > d_2$  or  $d_1 = 2 * d_2$  and wherein in at least one pixel only the second electrode overlaps at least a part of a channel area of a transistor with which the first and second electrode are in electrical communication (claims 29-32, 35 and 36).

Species II: a liquid crystal display device comprising a first transmissive conductor and a second reflective conductor having a wave -like surface shape and an insulation layer formed on the second reflective conductive layer having a wave-like surface shape (claim 37).

Applicant is required under 35 U.S.C. 121 to restrict this application to a single disclosed species for prosecution on the merits to which the claims shall be restricted. No generic claim is present or allowable.

Since applicant has received an action on the merits for the originally presented invention, this invention has been constructively elected by original presentation for prosecution on the merits. Accordingly, claim 37 are withdrawn as being directed to a non-elected species. See 37 CFR 1.142(b) and MPEP § 821.03.

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2. An examiner's amendment to the record appears below. Should the changes and/or additions be unacceptable to applicant, an amendment may be filed as provided by 37 CFR 1.312. To ensure consideration of such an amendment, it MUST be submitted no later than the payment of the issue fee.

Authorization for this examiner's amendment was given in a telephone interview with Mr. Joseph A. Rhoa on 08/20/02.

The application has been amended as follows:

Claim 37 has been canceled as drawn to a nonelected species, election having been made without traverse by original presentation of claims.

In claim 30, line 21, "defined by a relationship  $d1 > d2$ , and wherein the relationship is  $d1 = 2 * d2$ ." has been changed to –defined by a relationship  $d1 = 2 * d2$ .

—.

In claim 31, line 21, "defined by a relationship  $d1 > d2$ , and wherein the relationship is  $d1 = 2 * d2$ ." has been changed to –defined by a relationship  $d1 = 2 * d2$ .

—.

### ***Allowable Subject Matter***

3. Claims 29-36 are allowed.

The following is an examiner's statement of reasons for allowance:

As to claims 29-31, none of the prior arts alone or in combination discloses the claimed liquid crystal display device including a reflection area and a transmission area wherein a thickness ( $d1$ ) of the liquid crystal layer in the transmissive electrode region and a thickness ( $d2$ ) of the liquid crystal layer in the reflective electrode region are

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defined by a relationship  $d1 > d2$  or  $d1 = 2 * d2$ , and wherein thickness ( $d1$ ) is substantially larger than thickness ( $d2$ ) so that electrooptical characteristics of the reflection area and the transmission area are approximately matched.

As to claims 32 and 35, none of the prior arts alone or in combination discloses the claimed liquid crystal display device including a reflective electrode and a transmissive electrode that are formed as independent to each other and wherein only the reflective electrode, but not the transmissive electrode, overlaps at least part of a channel area of a transistor with which the transmissive electrode and the reflection electrode are in electrical communication.

The closest reference Yoshida discloses a liquid crystal display device wherein both the reflective electrode and the transmissive electrode are coextensive and thus does not meet the claimed limitation.

Any comments considered necessary by applicant must be submitted no later than the payment of the issue fee and, to avoid processing delays, should preferably accompany the issue fee. Such submissions should be clearly labeled "Comments on Statement of Reasons for Allowance."

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Tarifur R Chowdhury whose telephone number is (703) 308-4115. The examiner can normally be reached on M-Th (6:30-5:00) Friday Off.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, William L Sikes can be reached on (703) 305-4842. The fax phone numbers for the organization where this application or proceeding is assigned are (703)

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746-7005 for regular communications and (703) 308-7724 for After Final communications.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (703) 308-1782.

TRC  
August 22, 2002

A handwritten signature in cursive script, reading "William L. Sikes".

**William L. Sikes**  
Supervisory Patent Examiner  
Technology Center 2800